

## International Mobility of the Highly Skilled

**The migration of skilled  
workers: the other face  
of globalisation**

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### Introduction

This *Policy Brief* presents some of the key findings from the OECD seminar on “International Mobility of Highly Skilled Workers: From Statistical Analysis to Policy Formulation”, organised in Paris in June 2001 by the Directorate for Science, Technology and Industry (DSTI) and the Directorate for Education, Employment, Labour and Social Affairs (DEELSA). It examines the evidence on the magnitude and drivers behind the recent increase in the international migration of information technology workers, researchers, scientists, university students, and other categories of highly skilled labour. It then discusses their impact on innovation and economic performance and makes the case for government policies to foster the international mobility of skilled workers, whilst ensuring that countries of origin too, especially developing ones, can eventually benefit from the international mobility of human capital. ■

### The migration of skilled workers: the other face of globalisation

The migration of people across national borders is part and parcel of the globalisation process. Migrants admitted on family reunification or humanitarian grounds (refugees and asylum seekers) and low-skilled workers constitute the bulk of international migration flows. However, international migration of highly skilled workers is on the rise and has emerged as an issue of increased relevance, not just to immigration ministries but also to higher education and research ministries as well as economic ministries. Indeed, during the recent economic expansion a strong increase in demand for skilled relative to unskilled labour, especially in the information technology sector – combined with an apparent shortage of such workers in a number of OECD countries – prompted several governments to implement policies to facilitate the entry of foreign skilled workers. ■

### What are the scale and characteristics of the mobility of the highly skilled between OECD countries?

While most skilled workers migrate from developing countries to OECD countries, there is also important intra-regional migration of the highly skilled in Europe, the Americas and Asia. Data show that countries such as Canada, France, Germany, Sweden and the United Kingdom are important sources of temporary skilled migrants to the United States (e.g. postdoctoral students, researchers, company transferees), but less so in terms of permanent skilled migration, suggesting more a pattern of “brain circulation” than one of “brain drain”. Among some OECD countries such as Canada, France and Germany, the evidence indicates that “brain drain” has been overestimated, notably because the return rate is high and because these countries are also hosts to

### Definition and measurement of the international mobility of the highly skilled

Lack of data on the permanent and temporary flows of migrants according to skill level in many OECD countries make international comparison difficult. There are, nevertheless, several data sources that can be used to gauge the stocks and flows of highly skilled migrants in the receiving OECD countries. These include population censuses, population registers, labour force surveys, administrative data, specific surveys and case studies. Taken alone, however, none of these provide an entirely satisfactory means of measurement:

**Population censuses** are exhaustive in coverage and are conducted using standard international classifications, but are carried out too infrequently and do not always provide the information desired (e.g. on duration of stay).

**Population registers**, where these exist, are mainly concerned with demographic data and, in a migration sense, aspects such as date of entry to the country, intended duration of stay etc. They generally do not seek information on educational levels or labour market characteristics, even though in some countries links can be established with other sources (e.g. social security registers).

**Labour force surveys**, although they also pose problems (e.g. small sample size), are nevertheless one main source of information available for making international comparisons.

**Administrative sources** (e.g. work permits, temporary visas) provide relevant data but do not make use of the concepts, definitions and classifications necessary for calculating international statistics. In addition data on change of status are rarely available.

**Specific surveys** which track the highly skilled, with sometimes a focus on the foreign component, exist or are being implemented in certain countries and deserve to be more broadly used, developed and harmonised.

The definition of highly skilled workers is quite problematic, as there is no agreed international definition. However, the *OECD Canberra Manual* provides a useful basis for the *Measurement of Human Resources in Science and Technology (HRST)*. HRST is defined as a very broad population that has: 1) completed education at the third level in a S&T field of study; and/or 2) not formally qualified but is employed in an S&T occupation where the above qualifications are normally required. In practice, the flows and stocks of HRST, as proposed in this manual, have not been accurately measured using existing educational and occupational data sets. Only EU countries and Eurostat have applied the recommendations contained in the manual. Thus, additional efforts are needed for identifying HRST, notably on the basis of the ISCO classification (International Standard Classification of Occupations) that would allow comparisons between EU and other OECD countries.

Source: OECD (2002), *International Mobility of the Highly Skilled*.

highly skilled foreigners. For instance, a survey shows that in France in 1999, three years after completion of their PhD, only 7% of PhD graduates were still working abroad (most of whom had plans for returning to France soon). ■

### Who is moving?

International mobility of the highly skilled concerns men and women with a broad range of educational and occupational backgrounds; university students, nurses, information-technology (IT) specialists, researchers, business executives and managers, and intra-company transferees. Some of these highly skilled individuals, such as graduate students, IT specialists and business managers, migrate on a temporary basis, while others migrate with an intention to settle permanently in the host country.

By and large, the data on flows of the highly skilled show that skilled migration, especially from Asia, to the United States, Canada, Australia and the United Kingdom is quite significant (see Table 1). It is also increasing, particularly with regard to students and the temporary migration of skilled professionals such as IT workers. An estimated 900 000 highly skilled professionals entered the US labour market between 1990 and 2000 under the so-called H-1B visa programme for the temporary entry

of skilled workers. While this amount is small in comparison to the 750 000 permanent and 1.9 million temporary average annual entries, mainly based on family reunification and humanitarian grounds, the OECD estimates that these temporary workers accounted for one-sixth of the total US IT workforce.

Figure 1 highlights the relative importance of highly skilled foreign or foreign-born workers in total employment in Australia, Canada, United Kingdom and to a lesser extent in Denmark, Finland and Italy.

Transfers of staff within multinational companies (intra-company transferees) have also contributed to the increase in the mobility of highly qualified workers (see Table 2). The international mobility of skilled workers within the framework of provision of traded services internationally, is another form of labour migration that is increasing sharply. The movements are usually for short periods, though they may extend for several months or recur at frequent intervals. The General Agreement on Trade in Services (GATS) provides for the introduction of simplified procedures to assist temporary mobility of professionals in various sectors. However, the statistics generally combine these movements with the movements of business people (business trips), making them very hard to identify separately. ■

Table 1. **Inflows of foreign highly skilled workers and share of Asian people among them**  
Latest available year

|  | Permanent workers | Temporary |
|--|-------------------|-----------|
| <b>Australia (1999-2000)</b>   |                   |           |
| Inflows in thousands of highly skilled foreign workers                         | 35.3              | 30.0      |
| As a % of total permanent labour migration                                     | 77.4 <sup>1</sup> | ..        |
| % of Asian workers among the highly skilled                                    | ..                | 27.8      |
| <b>Canada (2000)</b>   |                   |           |
| Inflows in thousands of highly skilled foreign workers                         | 52.1              | 86.2      |
| As a % of total immigrants who intend to work                                  | 43.2              | ..        |
| % of Asian workers among the highly skilled                                    | 56.4              | ..        |
| <b>France (1999)</b>   |                   |           |
| Inflows in thousands of highly skilled foreign workers <sup>2</sup>            | –                 | 5.3       |
| As a % of total labour temporary migration                                     |                   | 48.3      |
| % of Asian workers among the highly skilled                                    |                   | 14.4      |
| <b>Germany (2000-2001)</b>   |                   |           |
| Inflows in thousands of highly skilled foreign workers                         | –                 | 8.6       |
| % of Asian workers among the highly skilled (India/Pakistan)                   |                   | 21.8      |
| <b>Japan (2000)</b>  |                   |           |
| Inflows in thousands of highly skilled foreign workers                         | –                 | 129.9     |
| As a % of total labour temporary migration                                     |                   | 70.6      |
| % of Asian workers among the highly skilled (China/Philippines)                |                   | 53.2      |
| <b>United Kingdom (2000)</b>   |                   |           |
| Inflows in thousands of highly skilled foreign workers                         | –                 | 39.1      |
| As a % of total labour temporary migration                                     |                   | 60.6      |
| % of Asian workers among the highly skilled (India/Philippines/China/Malaysia) |                   | 29.8      |
| <b>United States (1999)</b>  |                   |           |
| Inflows in thousands of highly skilled foreign workers                         | 24.1              | 370.7     |
| As a % of total labour permanent or temporary migration                        | 46.0 (1998)       | 46.3      |
| % of Asian workers among the highly skilled                                    | 46.4 (1998)       | 36.9      |

Notes: a) All immigrant workers to European countries mentioned above and to Japan are recruited on a temporary basis; b) Intra-company transferees are not included. c) All data relate to specific programmes dedicated to highly skilled workers except for France and the United Kingdom for which highly skilled are those engaged in occupations classified as manager or professional.

1. Calculation based on the estimates of the per cent of immigrants in workforce (Longitudinal Survey of Immigrants in Australia, 1998-99).

2. Including permits for more than one year, generally classified as "permanent workers".

Source: *Trends in International Migration*, OECD, 2001.

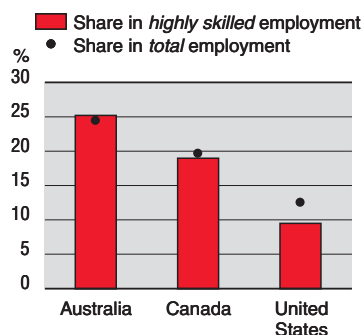
## What drives highly skilled people to move internationally?

Like other categories of migrants, skilled people mostly move in response to economic opportunities abroad that are better than those available at home as well as in response to the migration policies in destination countries. Other factors, however, also play a role in the decision of the highly skilled to migrate and in their choice of destination and include intellectual pursuits, be it education, research or language training. In the case of researchers and academics, the conditions in the host country regarding support for research and demand for R&D staff and academics can be an important determinant

in the migration decision and destination. Among the entrepreneurially-minded, the climate for innovation generally, and for business start-ups and self-employment in particular, may play an important role in the decision of the highly skilled to move abroad.

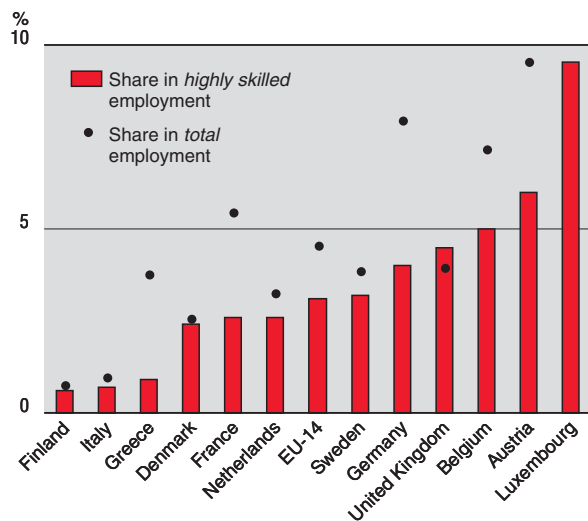
Another factor of mobility is associated with the growth and spread of multinationals. For example, in the mid-nineties, intra-company transferees accounted for 5 to 10% of the total flows of skilled workers from Canada to the United States. Economic integration, in particular in certain regions (EU, Nordic countries, New Zealand and Australia) where access to national labour markets is granted to foreigners from within the region or where

Figure 1a. Share of foreign-born in highly skilled employment (last year available)



Source: Trends in International Migration. OECD 2001.

Figure 1b. Share of non nationals in highly skilled employment, European countries (1998)



Source: Science, Technology and Industry Scoreboard. OECD 2001. Based on data from the Eurostat Labour Force Survey.

international agreements (e.g. in the case of NAFTA) facilitate access, also affects the international mobility of skilled workers.

Not all skilled migrants move in response to demand or in pursuit of educational, economic or intellectual opportunities. Often, especially in developing countries, the most skilled individuals leave their homeland involuntarily, as a result of war, economic collapse, or political and religious persecution. Indeed, skilled migrants are often found among refugees and asylum seekers. The

Table 2. Intra-company transferees in selected OECD countries, 1995-1999

|                         | Thousands |       |      |       |      |
|-------------------------|-----------|-------|------|-------|------|
|                         | 1995      | 1996  | 1997 | 1998  | 1999 |
| Canada <sup>1</sup>     | ..        | ..    | 2.1  | 2.8   | 2.9  |
| France                  | 0.8       | 0.8   | 1.0  | 1.1   | 1.8  |
| Japan                   | 3.1       | 2.8   | 3.4  | 3.5   | 3.8  |
| Netherlands             | ..        | 1.6   | 2.3  | 2.7   | 2.5  |
| United Kingdom          | 14.0      | 13.0  | 18.0 | 22.0  | 15.0 |
| United States (visa L1) | 112.1     | 140.5 | ..   | 203.3 | ..   |

1. Including Mexican and American intracompany transferees who enter under the NAFTA agreement.

Source: OECD (2001), Trends in International Migration.

wars in former Yugoslavia, civil strife in Southern Africa and two-decades of conflict in Afghanistan led to an exodus of the youngest and brightest, with few opportunities for those that remained. ■

### What is the impact of highly skilled migrants on receiving and sending countries?

Economic analyses conducted by the OECD, as well as in OECD Member countries and non-member countries, have made it possible to assess the economic impact of the migration of skilled and highly skilled labour on sending and receiving countries. In general, research shows there are several net positive effects for the main host countries, notably the stimulation of innovation capacity, an increase in the stock of available human capital and the international dissemination of knowledge. The contribution of foreign-born scientists to science is illustrated, for instance, by the number of Nobel prizes awarded to US-based researchers of European or Asian origin, for example, 32% of US Nobel-prize winners in Chemistry between 1985 and 1999 were foreign-born. Skilled migrants are also a source of high-tech entrepreneurship. It is estimated that a quarter of Silicon Valley firms in 1998 were headed by immigrants from China and India, collectively generating almost USD 17 billion in sales and 52 300 jobs.

For sending countries, the loss of human capital can be at least partially offset by the return of migrants and the development of networks facilitating the circulation of skilled workers between host countries and their country of origin. The mobility of skilled workers can also promote investment in training in sending countries and increase inflows of foreign currency through remittances. In addition, certain countries offer too few job opportunities to their highly skilled workers, and in this case emigration may be not perceived as a limiting factor to the development of their industries, at least in the short run. The picture is totally different when emigration affects the provision of basic socio-economic services

(e.g. education and health). Many of the benefits for sending countries, however, can only be realised in the longer term and require that countries invest in science and technology infrastructure and the development of the opportunities for teaching, research and entrepreneurship at home. The case of Chinese Taipei, as well as those of Korea and Ireland, suggests that when skilled migrants return to their origin country after a long stay abroad, their contribution to the expansion of a national high tech industry can be considerable. ■

### Are foreign students in OECD countries a potential labour force reserve?

OECD countries are increasingly seeking to attract specialised foreign students, particularly in the field of science and technology, and to facilitate their access to the labour market. While the US attracts the most foreign students, accounting for one-third of all foreign students studying in the OECD, other countries have a high intake of foreign students. These include Australia, Switzerland, Austria, the United Kingdom and Luxembourg (see Table 3), all of which have more than 100 foreign students for every 1 000 enrolled. Countries are recruiting foreign students

Table 3. **Stock of foreign students in selected OECD countries, 1998**  
Thousands and percentages

|                   | Thousands      | of which: from another OECD country (%) |
|-------------------|----------------|---|
| Australia         | 109.4          | 18.4                                    |
| Austria           | 28.4           | 65.6                                    |
| Belgium           | 7.3            | 63.2                                    |
| Canada            | 32.9           | 42.1                                    |
| Czech Republic    | 4.1            | 27.6                                    |
| Denmark           | 11.0           | 42.0                                    |
| Finland           | 4.3            | 35.9                                    |
| France            | 148.0          | 26.8                                    |
| Germany           | 171.2          | 56.3                                    |
| Hungary           | 6.7            | 35.8                                    |
| Iceland           | 0.2            | 81.4                                    |
| Ireland           | 6.9            | 72.3                                    |
| Italy             | 23.2           | 64.5                                    |
| Japan             | 55.8           | 38.2                                    |
| Korea             | 2.5            | 31.2                                    |
| Luxembourg        | 0.6            | 84.3                                    |
| New Zealand       | 5.9            | 21.5                                    |
| Norway            | 5.8            | 54.5                                    |
| Poland            | 5.4            | 17.7                                    |
| Spain             | 29.0           | 65.7                                    |
| Sweden            | 12.6           | 63.1                                    |
| Switzerland       | 24.4           | 72.7                                    |
| Turkey            | 18.7           | 8.9                                     |
| United Kingdom    | 209.6          | 59.8                                    |
| United States     | 430.8          | 39.0                                    |
| <b>Total OECD</b> | <b>1 327.2</b> | <b>44.5</b>                             |

Source: OECD (2001), *Education at a Glance*.

not only because the tuition fees paid generate a direct financial benefit to the universities concerned but also because they provide a potential reserve of highly qualified labour that is familiar with prevailing rules and conditions in the host country.

Upon graduation, many of these students remain in their host country. Data from the United States show, on average, 47% of foreign-born PhD graduates remain in the United States. In addition, nearly 25 per cent of immigrants on H1B temporary visas in 1999 were initially students enrolled at US universities. There are striking differences among countries of origin, however. The average stay rates of foreign science and engineering PhD graduates in the US between 1990 and 1999 were higher among migrants from China (87%), India (82%) and the United Kingdom (79%), than among those from Chinese Taipei (57%) or Korea (39%). It is noteworthy, however, that Chinese students studying in European countries tend to stay more on a temporary basis than those studying in the United States. ■

### What is the role of migration policies?

The policy objectives regarding immigration of highly skilled workers in most OECD countries are threefold: *i)* to respond to market shortages; *ii)* to increase the stock of human capital; and *iii)* to encourage the circulation of the knowledge embodied in highly skilled workers and promote innovation. Regarding the first two objectives, migration policies in receiving countries increasingly focus on the development of temporary migration schemes based on skills and competence criteria combined with greater selectivity in general migration policy. This is the case in traditional immigration countries such as the United States, Canada and Australia which have developed specific policies to promote the permanent residence of highly qualified individuals and the temporary migration of specialists and business personnel. Most European countries, for their part, are focusing on fostering the temporary residence of both skilled workers and students. In other OECD countries, as well as in some dynamic Asian economies such as Singapore, measures have recently been adopted that specifically target employment in the information and communications sector, for example, in order to ease skill shortages. In this regard, a key issue to be considered is striking a balance between the interests of the main partners concerned, *i.e.* government, employers, the domestic and foreign workforce and sending countries. ■

### Why science and innovation policies matter too

The nature of high-skill migration, in particular the role that the infrastructure for research and innovation play in attracting top talent to migrate, introduces another dimension to the role of governments: the need to co-ordinate science and innovation policies with migration policies in order to enhance the attractiveness of receiving countries

### Recent changes in migration policies to facilitate the mobility of highly skilled foreign workers

Most OECD Member countries have amended their legislation in order to facilitate the admission of foreign specialists, in particular in high-technology fields. These measures are composed of four principal elements:

*Relaxing immigration quotas.* In 2001, the United States raised the annual quota of H1B visas reserved for professionals and skilled workers by nearly 70% compared with the level in 2000. Over the coming three fiscal years, 195 000 people can be granted temporary admission to the country under this programme. In addition, the 7% ceiling on the proportion of visas going to nationals of any given country has been lifted.

*Setting up special programmes to meet skill shortages.* In August 2000, the German government instituted a “green card” programme under which, after one year, 8600 computer and technology specialists entered Germany in 2001 to work for up to five years.

*Facilitating recruitment conditions or procedures and relaxing criteria for issuing employment visas for highly skilled workers.* Since 1998, France has been applying a simplified system for computer specialists, under which reference to the employment situation in France is no longer required. The United Kingdom now applies simplified fast-track procedures for issuing work permits for certain occupations and has extended the list of shortage occupations. Australia has amended its points systems for permanent immigrants, giving more weight to a number of skills including those in new technology fields. In Korea, skilled workers can now stay in the country permanently.

*Allowing foreign students to change status at the end of their course and thereby enter the labour market.* In the United States, almost a quarter of new recipients of H1B visas are students already residing in the country. In Germany and Switzerland, students are no longer compelled to leave at the end of their course and may apply for an employment visa. In Australia, students who apply for a temporary skilled work visa within six months of graduation are exempt from the normal requirements relating to work experience.

Source: OECD (2001) *International Mobility of the Highly skilled; Trends in International Migration*.

but also, in sending countries, to develop an adequate scientific, technological and business environment that will provide rewarding opportunities for the return of individuals who have upgraded their skills abroad and/or serve to persuade such skilled personnel to stay in their home countries.

The development of a high-tech and innovative industry is also an important magnet for attracting skilled human capital. More specifically, developing centres of excellence for scientific research and framing the conditions under which technological innovation and entrepreneurship may expand are important for making a country attractive to highly skilled workers, both native-born and from abroad. Therefore, the entire range of policies aimed at encouraging innovation has an indirect but powerful effect on the incentives for these workers to come to the labour market of the concerned country. Such policies include fostering entrepreneurship, mechanisms influencing the allocation of capital, training and education, public research and its links with business. Among sending countries, the creation of science parks in Chinese Taipei has triggered the return of former migrant engineers and researchers trained abroad. Certain countries have specific systems of scholarship for the best foreign students. Conversely, a weak public research base can be a “push” factor for national researchers, especially the young, due to scarcity of job openings and resources, or to a too rigid organisation which ties career

advancement to seniority instead of performance. Finally, policies directed at encouraging HRST based overseas to remain in contact with the home country could also be expected to promote the diffusion of the knowledge and experience gained as well as serving to promote return migration. ■

### The role of non-governmental organisations and immigrant networks

The existence of a “scientific diaspora” and “immigrant entrepreneur networks” can also play a role in helping sending countries capture some benefits and know-how from emigrants overseas. Such networks are often sponsored at the local and institutional level, but national and international support is often an important catalyst. Grass-roots initiatives in South Africa and Latin America but also in advanced countries such as France, Germany, Hungary and Switzerland have been developed to link researchers overseas to networks in their home countries. Immigrant networks of overseas businessmen and entrepreneurs and “brain circulation” between India and the United States have been one important driver of knowledge development in India. The Indian government has contributed to the emergence of such private networks through legislative and tax rules that foster remittances and investment by Indians overseas. ■

### Science and technology policies to retain and attract scientific talent

*Developing the infrastructure for innovation and high-tech entrepreneurship.* The development of Germany's biotechnology industry, supported in part by the government's *Bio-regio* initiative to leverage public research funding with private investment, has been credited with attracting the return of German researchers and scientists from the United States. In Iceland, a single biotechnology firm, DeCode Genetics, has helped attract foreign scientists and reverse a long-standing brain. Among developing countries, India is supporting business and technology incubators to foster entrepreneurship.

*Improving the attractiveness of the public research sector.* The UK government plans to increase the salaries of post-doctorates by 25% and increase funding for the hiring of university professors. The European Commission has doubled the amount of funding devoted to human resources in the Sixth Research Framework Programme to 1.8 billion euros in order to improve the attractiveness of the European research area. Jointly with the Wolfson Foundation, the UK government is funding a Research Merit Award scheme, run by the Royal Society and worth £20 m over 5 years. This offers institutions additional funds to increase the salaries of researchers whom they wish to retain or recruit from industry or overseas. China has recently launched a project to develop 100 universities into world-class institutions that not only provide higher education training to nationals but also academic employment and research opportunities.

*Providing tax incentives to encourage recruitment of foreign personnel.* In 2001, Sweden passed a new law to alleviate the tax burden on foreign experts and highly skilled workers who live in Sweden for less than five years. Denmark, the Netherlands and Belgium have adopted similar policies. In Quebec, the government is offering 5-year income tax holidays (credits) to attract foreign academics in IT, engineering, health science and finance to take employment in the province's universities.

*Repatriation schemes for post-docs and scientists.* The Academy of Finland has a programme to ease the return to Finland of Finnish researchers, who have been abroad for a length of time. In Austria, the Schroedinger scholarships help returning Austrians integrate into scientific institutions. Germany's Ministry for Research and Education (BMBF) has also launched a new programme in 2001 to attract the return migration of German researchers overseas. In support of the repatriation of Canadian postdoctoral researchers, the Canadian Institute for Health Research (CIHR) offers a supplementary year of funding to Canadians and permanent residents who are recipients of either the Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellowships for Foreign Researchers or Wellcome Trust/CIHR Postdoctoral Fellowships. In order to be eligible for the "Canada Year" funding, training must take place in a Canadian laboratory.

*Leveraging immigrant and diaspora networks.* The South African Network of Skills Abroad (SANSa) helps strengthen ties between highly skilled South Africans residing abroad and peers residing in South Africa as well as with scientists in other countries. In the US, highly skilled Indian and Chinese immigrants have established professional and ethnic associations such as the Monte Jade Science and Technology Association and the Indus Entrepreneurs network to foster capital and information flows between sending and host countries. Such networks also exist among emigrants from developed countries; Swiss scientists in the US have created an Internet network and directory (*Swiss-List.com*) to link Swiss scientists and post-doctorates working in the US to colleagues in Switzerland. The French foreign ministry sponsors meetings between French post-doctorates working in US research institutions and French companies.

Source: OECD (2001) *The International Mobility of the Highly skilled*; national sources, 2002.

## Conclusion

The international migration of skilled workers, in particular the temporary migration of IT workers and researchers, rose substantially in OECD countries during the 1990s. There is also substantial evidence in individual countries that confirms that skilled migration can have a positive impact on the scientific and technology assets of receiving countries and therefore on innovation and economic performance. Countries would be short-sighted, however, to rely too heavily on importing qualified science and technology personnel in the longer term as demand conditions may change or sources of supply may shift. Migration of HRST must not justify a reduction in national investment in education. Finally, even if policy makers and researchers increasingly recognise that migration is not a zero-sum game, it remains that the costs and benefits are likely to be unevenly distributed, so that some sending countries

may in fact experience a "brain drain", at least in the short term. Policies aimed at facilitating the recruitment and mobility of highly skilled workers, in particular policies directed at encouraging HRST based overseas to remain in contact with the home country, must endeavour to promote the diffusion of the knowledge and experience gained. ■

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## For further reading

- **International Mobility of Highly-skilled Workers:** Proceedings from the OECD Seminar (OECD, 2002).
- **Drivers of Growth: Information Technology, Innovation and Entrepreneurship** (OECD, 2001).
- **Innovative People: Mobility of Skilled Personnel in National Innovation Systems** (OECD, 2001).
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- **Science, Technology and Industry Outlook** (OECD, 2000).
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